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Inventor: TO HING WING; APPLETO CHRISTOPHER

Applicant: MICROMUSE LTD (GB)

EC: H04L12/56C1

IPC: H04L12/56; H04L12/56; (IPC1-7): H04L12/00

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Volume 23, Issue 3, March 2005 Page(s):547 - 560 Digital Object Identifier 10.1109/JSAC.2004.842533

AbstractPlus | References | Full Text: PDF(696 KB) | IEEE JNL

Г	<ol> <li>Impact of Traffic Correlation on the Effectiveness of Multilayer Traffic Eng Hayashi, R.; Miyamura, T.; Shiomoto, K.; Urushidani, S.; Communications, 2005 Asia-Pacific Conference on 03-05 Oct. 2005 Page(s):936 - 940</li> </ol>
	AbstractPlus   Full Text: PDF(448 KB)   IEEE CNF
Ľ	7. A Power-Aware Multicast Routing Protocol forMobile Ad Hoc Networks w Prediction Nen-Chung Wang; Yu-Li Su; Local Computer Networks, 2005. 30th Anniversary. The IEEE Conference on 15-17 Nov. 2005 Page(s):408 - 417 Digital Object Identifier 10.1109/LCN.2005.15 AbstractPlus   Full Text: PDF(304 KB) IEEE CNF
	8. A new fault information model for fault-tolerant adaptive and minimal rou meshes Jiang, Z.; Wu, J.; Wang, D.; Parallel Processing, 2005. ICPP 2005. International Conference on 14-17 June 2005 Page(s):500 - 507 Digital Object Identifier 10.1109/ICPP.2005.9  AbstractPlus   Full Text: PDF(200 KB) IEEE CNF
	<ol> <li>Random walks in a dynamic small-world space: robust routing in large-senetworks         Rezaei, B.A.; Sarshar, N.; Roychowdhury, V.P.;         Vehicular Technology Conference, 2004. VTC2004-Fall. 2004 IEEE 60th         Volume 7, 26-29 Sept. 2004 Page(s):4640 - 4644 Vol. 7         Digital Object Identifier 10.1109/VETECF.2004.1404970         AbstractPlus   Full Text: PDF(3083 KB) IEEE CNF</li> </ol>
	10. Using minimal source trees for on-demand routing in ad hoc networks Roy, S.; Garcia-Luna-Aceves, J.J.; INFOCOM 2001. Twentieth Annual Joint Conference of the IEEE Computer ar Communications Societies. Proceedings. IEEE Volume 2, 22-26 April 2001 Page(s):1172 - 1181 vol.2 Digital Object Identifier 10.1109/INFCOM.2001.916312  AbstractPlus   Full Text: PDF(232 KB) IEEE CNF
	11. Multiple source, multiple destination network tomography Rabbat, M.; Nowak, R.; Coates, M.; INFOCOM 2004. Twenty-third Annual Joint Conference of the IEEE Computer Communications Societies Volume 3, 2004 Page(s):1628 - 1639 vol.3 Digital Object Identifier 10.1109/INFCOM.2004.1354575 AbstractPlus   Full Text: PDF(937 KB) IEEE CNF
Fi-	12. Too much mobility limits the capacity of wireless ad hoc networks Jafar, S.A.; Information Theory, IEEE Transactions on Volume 51, Issue 11, Nov. 2005 Page(s):3954 - 3965 Digital Object Identifier 10.1109/TIT.2005.856965 AbstractPlus   Full Text: PDF(440 KB) IEEE JNL
	13. A framework for routing and congestion control for multicast information Sarkar, S.; Tassiulas, L.; Information Theory, IEEE Transactions on Volume 48, Issue 10, Oct. 2002 Page(s):2690 - 2708 Digital Object Identifier 10, 1109/TIT 2002 802619

AbstractPlus | References | Full Text: PDF(655 KB) IEEE JNL

	14. Flow control for end-to-end delay and power constrained wireless multih Fang, J.C.; Rao, R.R.; Military Communications Conference, 2004. MILCOM 2004. IEEE Volume 1, 31 Oct3 Nov. 2004 Page(s):487 - 492 Vol. 1 Digital Object Identifier 10.1109/MILCOM.2004.1493315
	AbstractPlus   Full Text: PDF(366 KB) IEEE CNF
	15. Simulating realistic packet routing without routing protocols Riley, G.F.; Dheeraj Reddy; Principles of Advanced and Distributed Simulation, 2005. PADS 2005. Worksh 1-3 June 2005 Page(s):151 - 158 Digital Object Identifier 10.1109/PADS.2005.28
	AbstractPlus   Full Text: PDF(144 KB) IEEE CNF
Tri)	16. A transition-based fault-tolerant routing methodology for InfiniBand netw Montanana, J.M.; Flich, J.; Robles, A.; Lopez, P.; Duato, J.; Parallel and Distributed Processing Symposium, 2004. Proceedings. 18th Intel 26-30 April 2004 Page(s):186 Digital Object Identifier 10.1109/IPDPS.2004.1303198
	AbstractPlus   Full Text: PDF(1370 KB) IEEE CNF
	17. Redundant transmission using Internet protocol version 6 Nizzoli, G.P.; Mazzini, G.; Vehicular Technology Conference, 2003. VTC 2003-Fall. 2003 IEEE 58th Volume 5, 6-9 Oct. 2003 Page(s):3434 - 3438 Vol.5 Digital Object Identifier 10.1109/VETECF.2003.1286345
	AbstractPlus   Full Text: PDF(217 KB) IEEE CNF
	18. Single and multipath logical topology design and traffic grooming algorit WDM networks  Lee, K.; Shayman, M.;  Computer Communications and Networks, 2003. ICCCN 2003. Proceedings. International Conference on 20-22 Oct. 2003 Page(s):59 - 64  Digital Object Identifier 10.1109/ICCCN.2003.1284150
	AbstractPlus   Full Text: PDF(400 KB) IEEE CNF
	19. Routing guaranteed bandwidth virtual paths with simultaneous maximiza additional flows Kumar, D.; Kuri, J.; Kumar, A.; Communications, 2003. ICC '03. IEEE International Conference on Volume 3, 11-15 May 2003 Page(s):1759 - 1764 vol.3 Digital Object Identifier 10.1109/ICC.2003.1203902
	AbstractPlus   Full Text: PDF(330 KB) IEEE CNF
С	20. An efficient optimal algorithm for virtual path bandwidth allocation Maosong Luo; Wu Ye; Shenye Huang; Suili Feng; Zhaonan Li; Advanced Information Networking and Applications, 2003. AINA 2003. 17th Int Conference on 27-29 March 2003 Page(s):487 - 490 Digital Object Identifier 10.1109/AINA.2003.1192926
	AbstractPlus   Full Text: PDF(249 KB) IEEE CNF
С	21. Dynamic reconfiguration based on balanced alternate routing algorithm ( optical wavelength-routed WDM networks Bin Zhou: Jun Zheng: Mouftah. H.T.:

Global Telecommunications Conference, 2002. GLOBECOM '02. IEEE Volume 3, 17-21 Nov. 2002 Page(s):2706 - 2710 vol.3 Digital Object Identifier 10.1109/GLOCOM.2002.1189121

AbstractPlus | Full Text: PDF(422 KB) IEEE CNF

#### 22. Ad hoc on-demand backup node setup routing protocol

Chung, C.M.; Ying-Hong Wang; Chih-Chieh Chuang; Information Networking, 2001. Proceedings. 15th International Conference on 31 Jan.-2 Feb. 2001 Page(s):933 - 937

Digital Object Identifier 10.1109/ICOIN.2001.905638

AbstractPlus | Full Text: PDF(416 KB) IEEE CNF

#### 23. Route optimization of multicast sessions in sparse light-splitting optical

Shuguang Yan; Ali, M.; Jitender Deogun;

Global Telecommunications Conference, 2001. GLOBECOM '01. IEEE Volume 4, 25-29 Nov. 2001 Page(s):2134 - 2138 vol.4

Digital Object Identifier 10.1109/GLOCOM.2001.966158

AbstractPlus | Full Text: PDF(95 KB) IEEE CNF

#### 24. A dynamic mix method for wireless ad hoc networks

Shu Jiang; Vaidya, N.H.; Wei Zhao;

Military Communications Conference, 2001. MILCOM 2001. Communications

Centric Operations: Creating the Information Force, IEEE

Volume 2, 28-31 Oct. 2001 Page(s):873 - 877 vol.2 Digital Object Identifier 10.1109/MILCOM.2001.985964

AbstractPlus | Full Text: PDF(136 KB) IEEE CNF

#### 25. A distributed multicast routing protocol for ad-hoc (flat) mobile wireless i

Bhattacharya, R.; Ephremides, A.;

Personal, Indoor and Mobile Radio Communications, 1997. 'Waves of the Yea

'97., The 8th IEEE International Symposium on

Volume 3, 1-4 Sept. 1997 Page(s):877 - 881 vol.3

Digital Object Identifier 10.1109/PIMRC.1997.627012

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Volume 2, 12-15 May 2004 Page(s):579 - 582 Vol.2 <u>AbstractPlus</u> | Full Text: <u>PDF</u>(521 KB) | **IEEE CNF** 

	6. On-demand ad hoc routing protocol with backup node Wang, Y.H.; Chuang, C.M.; Chuang, C.C.; TENCON '02. Proceedings. 2002 IEEE Region 10 Conference on Computers, Control and Power Engineering Volume 2, 28-31 Oct. 2002 Page(s):1069 - 1072 vol.2
	AbstractPlus   Full Text: PDF(378 KB) IEEE CNF
C	7. Ad hoc on-demand backup node setup routing protocol Chung, C.M.; Ying-Hong Wang; Chih-Chieh Chuang; Information Networking, 2001. Proceedings. 15th International Conference on 31 Jan2 Feb. 2001 Page(s):933 - 937 Digital Object Identifier 10.1109/ICOIN.2001.905638 AbstractPlus   Full Text: PDF(416 KB) IEEE CNF
	8. A peer-to-peer zone-based two-level link state routing for mobile ad hoc a Joa-Ng, M.; I-Tai Lu; Selected Areas in Communications, IEEE Journal on Volume 17, Issue 8, Aug. 1999 Page(s):1415 - 1425 Digital Object Identifier 10.1109/49.779923
	AbstractPlus   References   Full Text: PDF(196 KB)   IEEE JNL
	<ol> <li>A novel approach for protecting multicast sessions in metropolitan WDM Rammohan, N.; Murthy, C.S.R.;</li> <li>Local and Metropolitan Area Networks, 2004. LANMAN 2004. The 13th IEEE V 25-28 April 2004 Page(s):81 - 86</li> <li>Digital Object Identifier 10.1109/LANMAN.2004.1338406</li> </ol>
	AbstractPlus   Full Text: PDF(585 KB) IEEE CNF
	10. A GPS-based peer-to-peer hierarchical link state routing for mobile ad ho Joa-Ng, M.; I-Tai Lu; Vehicular Technology Conference Proceedings, 2000. VTC 2000-Spring Tokyo Volume 3, 15-18 May 2000 Page(s):1752 - 1756 vol.3 Digital Object Identifier 10.1109/VETECS.2000.851573
	AbstractPlus   Full Text: PDF(368 KB) IEEE CNF
П	11. A distributed routing algorithm for multihop packet radio networks with undirectional links Pomalaza-Raez, C.; Tactical Communications Conference, 1994. Vol. 1. Digital Technology for the Communicator., Proceedings of the 1994 10-12 May 1994 Page(s):365 - 370 Digital Object Identifier 10.1109/TCC.1994.472111
	AbstractPlus   Full Text: PDF(320 KB) IEEE CNF
Γ	12. Scalable geographic routing algorithms for wireless ad hoc networks Frey, H.; Network, IEEE Volume 18, Issue 4, July-Aug. 2004 Page(s):18 - 22 Digital Object Identifier 10.1109/MNET.2004.1316756 AbstractPlus   Full Text: PDF(555 KB) IEEE JNL
Γ	13. Incremental, dynamic, virtual circuit connection (IVCC): a new paradigm future high-speed networks Razouqi, Q.; Lee, T.; Seong-Soon Joo; Ghosh, S.; Communications, 2001. ICC 2001. IEEE International Conference on Volume 8, 11-14 June 2001 Page(s):2578 - 2582 vol.8 Digital Object Identifier 10.1109/ICC.2001.936615
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Measuring ISP topologies with rocketfuel

Neil Spring, Ratul Mahajan, David Wetherall

August 2002 ACM SIGCOMM Computer Communication Review , Proceedings of the 2002 conference on Applications, technologies, architectures, and protocols for computer communications SIGCOMM '02, Volume 32 Issue 4

Publisher: ACM Press

Full text available: pdf(1.21 MB)

Additional Information: full citation, abstract, references, citings, index terms

To date, realistic ISP topologies have not been accessible to the research community, leaving work that depends on topology on an uncertain footing. In this paper, we present new Internet mapping techniques that have enabled us to directly measure router-level ISP topologies. Our techniques reduce the number of required traces compared to a brute-force, all-to-all approach by three orders of magnitude without a significant loss in accuracy. They include the use of BGP routing tables to focus the ...

Measuring ISP topologies with rocketfuel

Neil Spring, Ratul Mahajan, David Wetherall, Thomas Anderson February 2004 IEEE/ACM Transactions on Networking (TON), Volume 12 Issue 1

Publisher: IEEE Press

Full text available: pdf(732.86 KB)

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To date, realistic ISP topologies have not been accessible to the research community, leaving work that depends on topology on an uncertain footing. In this paper, we present new Internet mapping techniques that have enabled us to measure router-level ISP topologies. Our techniques reduce the number of required traces compared to a bruteforce, all-to-all approach by three orders of magnitude without a significant loss in accuracy. They include the use of BGP routing tables to focus the measurem ...

Keywords: communication system operations and management, internet, measurement, network reliability

3 Topology management for improving routing and network performances in mobile ad hoc networks Navid Nikaein, Christian Bonnet

December 2004 Mobile Networks and Applications, Volume 9 Issue 6

Publisher: Kluwer Academic Publishers

Full text available: pdf(1.03 MB) Additional Information: full citation, abstract, references, index terms

A distributed topology management algorithm based on the construction of a forest from the topology of the network is proposed. In this algorithm, each tree of the forest forms a zone, and each zone is maintained proactively. As a result, the network can be seen as a set of non-overlapping zones. We introduce the concept of quality of connectivity for extracting the links connecting the pair of best nodes, and use this quality to construct the forest. We characterize the behaviors of the prop ...

Keywords: architecture, mobile ad hoc networks, network topology, performance evaluation, simulation, topology management

4 Restoration by path concatenation: fast recovery of MPLS paths

Anat Bremler-Barr, Yehuda Afek, Haim Kaplan, Edith Cohen, Michael Merritt August 2001 Proceedings of the twentieth annual ACM symposium on Principles of distributed computing

Publisher: ACM Press

Full text available: pdf(830.71 KB) Additional Information: full citation, abstract, references, index terms

A new general theory about restoration of network paths is first introduced. The theory pertains to restoration of shortest paths in a network following failure, e.g., we prove that a shortest path in a network after removing k edges is the concatenation of at most k + 1shortest paths in the original network.

The theory is then combined with efficient path concatenation techniques in MPLS (multiprotocol label switching), to achieve powerful schemes for restorati ...

<sup>5</sup> High-speed local area networks and their performance: a survey

Bandula W. Abeysundara, Ahmed E. Kamal

June 1991 ACM Computing Surveys (CSUR), Volume 23 Issue 2

Publisher: ACM Press

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terms, review

At high data transmission rates, the packet transmission time of a local area network (LAN) could become comparable to or less than the medium propagation delay. The performance of many LAN schemes degrades rapidly when the packet transmission time becomes small comparative to the medium propagation delay. This paper introduces LANs and discusses the performance degradation of LANs at high speeds. It surveys recently proposed LAN schemes designed to operate at high data rates, including the ...

Keywords: access schemes, computer networks, data communication, medium access protocols, optical fiber networks

Factors in the performance of the AN1 computer network

Susan S. Owicki, Anna R. Karlin

June 1992 ACM SIGMETRICS Performance Evaluation Review, Proceedings of the 1992 ACM SIGMETRICS joint international conference on Measurement and modeling of computer systems SIGMETRICS '92/PERFORMANCE '92,

Volume 20 Issue 1

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Additional Information: full citation, abstract, references, citings, index terms

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AN1 (formerly known as Autonet) is a local area network composed of crossbar switches interconnected by 100Mbit/second, full-duplex links. In this paper, we evaluate the performance impact of certain choices in the AN1 design. These include the use of FIFO input buffering in the crossbar switch, the deadlock-avoidance mechanism, cut-through routing, back-pressure for flow control, and multi-path routing. AN1's performance goals were to provide low latency and high bandwidth in a lightly loa ...

Network topology generators: degree-based vs. structural

Hongsuda Tangmunarunkit, Ramesh Govindan, Sugih Jamin, Scott Shenker, Walter Willinger August 2002 ACM SIGCOMM Computer Communication Review, Proceedings of the 2002 conference on Applications, technologies, architectures, and protocols for computer communications SIGCOMM '02, Volume 32 Issue 4

Publisher: ACM Press

Additional Information: full citation, abstract, references, citings, index Full text available: pdf(271.45 KB)

Following the long-held belief that the Internet is hierarchical, the network topology generators most widely used by the Internet research community, Transit-Stub and Tiers, create networks with a deliberately hierarchical structure. However, in 1999 a seminal paper by Faloutsos et al. revealed that the Internet's degree distribution is a power-law. Because the degree distributions produced by the Transit-Stub and Tiers generators are not power-laws, the research community has largely dismissed ...

**Keywords**: degree-based generators, hierarchy, large-scale structure, network topology, structural generators, topology characterization, topology generators, topology metrics

GPSR: greedy perimeter stateless routing for wireless networks

Brad Karp, H. T. Kung

August 2000 Proceedings of the 6th annual international conference on Mobile computing and networking

Publisher: ACM Press

Full text available: pdf(1.41 MB) Additional Information: full citation, abstract, references, citings

We present Greedy Perimeter Stateless Routing (GPSR), a novel routing protocol for wireless datagram networks that uses the positions of routers and a packet's destination to make packet forwarding decisions. GPSR makes greedy forwarding decisions using only information about a router's immediate neighbors in the network topology. When a packet reaches a region where greedy forwarding is impossible, the algorithm recovers by routing around the perim ...

A performance comparison of multi-hop wireless ad hoc network routing protocols

Josh Broch, David A. Maltz, David B. Johnson, Yih-Chun Hu, Jorjeta Jetcheva October 1998 Proceedings of the 4th annual ACM/IEEE international conference on Mobile computing and networking

Publisher: ACM Press

Full text available: pdf(1.64 MB) Additional Information: full citation, references, citings, index terms

10 "Topologies"—distributed objects on multicomputers

Karsten Schwan, Win Bo

May 1990 ACM Transactions on Computer Systems (TOCS), Volume 8 Issue 2

Publisher: ACM Press

Additional Information: full citation, abstract, references, citings, index Full text available: pdf(3.83 MB) terms, review

Application programs written for large-scale multicomputers with interconnection structures known to the programmer (e.g., hypercubes or meshes) use complex communication structures for connecting the applications' parallel tasks. Such structures implement a wide variety of functions, including the exchange of data or control information relevant to the task computations and/or the communications required for task synchronization, message forwarding/filtering under program control, and so o ...

11 Routing networks for distributed hash tables

Gurmeet Singh Manku

July 2003 Proceedings of the twenty-second annual symposium on Principles of distributed computing

Publisher: ACM Press

Full text available: pdf(1.22 MB)

Additional Information: full citation, abstract, references, citings, index terms

Routing topologies for distributed hashing in peer-to-peer networks are classified into two categories: deterministic and randomized. A general technique for constructing deterministic routing topologies is presented. Using this technique, classical parallel interconnection networks can be adapted to handle the dynamic nature of participants in peer-to-peer networks. A unified picture of randomized routing topologies is also presented. Two new protocols are described which improve average latenc ...

12 Measuring the effects of internet path faults on reactive routing

Nick Feamster, David G. Andersen, Hari Balakrishnan, M. Frans Kaashoek
June 2003 ACM SIGMETRICS Performance Evaluation Review, Proceedings of the
2003 ACM SIGMETRICS international conference on Measurement and

modeling of computer systems SIGMETRICS '03, Volume 31 Issue 1

Publisher: ACM Press

Full text available: pdf(394.56 KB)

Additional Information: full citation, abstract, references, citings, index terms

Empirical evidence suggests that reactive routing systems improve resilience to Internet path failures. They detect and route around faulty paths based on measurements of path performance. This paper seeks to understand *why* and under *what circumstances* these techniques are effective. To do so, this paper correlates end-to-end active probing experiments, loss-triggered traceroutes of Internet paths, and BGP routing messages. These correlations shed light on three questions about Inte ...

13 Formal verification of standards for distance vector routing protocols

Karthikeyan Bhargavan, Davor Obradovic, Carl A. Gunter July 2002 Journal of the ACM (JACM), Volume 49 Issue 4

Publisher: ACM Press

Full text available: pdf(350.56 KB)

Additional Information: full citation, abstract, references, citings, index terms

We show how to use an interactive theorem prover, HOL, together with a model checker, SPIN, to prove key properties of distance vector routing protocols. We do three case studies: correctness of the RIP standard, a sharp real-time bound on RIP stability, and preservation of loop-freedom in AODV, a distance vector protocol for wireless networks. We develop verification techniques suited to routing protocols generally. These case studies show significant benefits from automated support in reduced ...

**Keywords**: AODV, Formal verification, HOL, RIP, SPIN, distance vector routing, interactive theorem proving, model checking, network standards, routing protocols

Load balanced deadlock-free deterministic routing of arbitrary networks

David J. Pritchard

# April 1992 Proceedings of the 1992 ACM annual conference on Communications

Publisher: ACM Press

Full text available: pdf(836.41 KB) Additional Information: full citation, abstract, references, index terms

This paper provides efficient algorithms to deadlock-free route arbitrary multiprocessor interconnection networks as follows: 1. An algorithm is derived for fixed directory routing on an arbitrary network topology such that messages will be routed via one of the shortest routes whilst maintaining an even distribution of traffic over the network (assuming that messages are generated and absorbed in an even manner, or two-phase random routing is used).

## 15 Alternate path routing for multicast

Daniel Zappala

February 2004 IEEE/ACM Transactions on Networking (TON), Volume 12 Issue 1

Publisher: IEEE Press

Full text available: pdf(336.78 KB) Additional Information: full citation, abstract, references, index terms

Current network-layer multicast routing protocols build multicast trees based only on hop count and policy. If a tree cannot meet application requirements, the receivers have no alternative. In this paper, we propose a general and modular architecture that integrates alternate path routing with the network's multicast services. This enables individual multicast receivers to reroute a multicast tree according to their needs, subject to policy restrictions. Our design focuses on the two primary co ...

Keywords: alternate path routing, multicast routing, performance evaluation, quality of service (OoS).

16 A simple approximation to minimum-delay routing



Srinivas Vutukury, J. J. Garcia-Luna-Aceves

August 1999 ACM SIGCOMM Computer Communication Review, Proceedings of the conference on Applications, technologies, architectures, and protocols for computer communication SIGCOMM '99, Volume 29 Issue 4

Publisher: ACM Press

Full text available: pdf(1.54 MB)

Additional Information: full citation, abstract, references, citings, index terms

The conventional approach to routing in computer networks consists of using a heuristic to compute a single shortest path from a source to a destination. Single-path routing is very responsive to topological and link-cost changes; however, except under light traffic loads, the delays obtained with this type of routing are far from optimal. Furthermore, if link costs are associated with delays, single-path routing exhibits oscillatory behavior and becomes unstable as traffic loads increase. On th ...

17 Deriving traffic demands for operational IP networks: methodology and experience Anja Feldmann, Albert Greenberg, Carsten Lund, Nick Reingold, Jennifer Rexford, Fred True June 2001 IEEE/ACM Transactions on Networking (TON), Volume 9 Issue 3

Publisher: IEEE Press

Full text available: pdf(212.92 KB)

Additional Information: full citation, abstract, references, citings, index terms

Engineering a large IP backbone network without an accurate network-wide view of the traffic demands is challenging. Shifts in user behavior, changes in routing policies, and failures of network elements can result in significant (and sudden) fluctuations in load. In this paper, we present a model of traffic demands to support traffic engineering and performance debugging of large Internet Service Provider networks. By defining a traffic demand as a volume of load originating from an ingres ...



**Keywords**: Internet, measurement, routing, traffic engineering

18 Low power SOCs and NOCs: High-level power analysis for on-chip networks



September 2004 Proceedings of the 2004 international conference on Compilers, architecture, and synthesis for embedded systems

Publisher: ACM Press

Full text available: Top pdf(353.56 KB) Additional Information: full citation, abstract, references, index terms

As on-chip networks become prevalent in multiprocessor systems-on-a-chip and multicore processors, they will be an integral part of the design flow of such systems. With power increasingly the primary constraint in chips, the tool chain in systems design, from simulation infrastructures to compilers and synthesis frameworks, needs to take network power into account, motivating the need for early-stage communication power analysis. While there has been substantial research in network performance ...

**Keywords**: link utilization, power analysis, simulation, systems-on-a-chip (SoC)

19 Deriving traffic demands for operational IP networks: methodology and experience

Anja Feldmann, Albert Greenberg, Carsten Lund, Nick Reingold, Jennifer Rexford, Fred True August 2000 ACM SIGCOMM Computer Communication Review , Proceedings of the conference on Applications, Technologies, Architectures, and Protocols for Computer Communication SIGCOMM '00, Volume 30 Issue 4

**Publisher: ACM Press** 

Additional Information: full citation, abstract, references, citings, index Full text available: pdf(341.59 KB)

Engineering a large IP backbone network without an accurate, network-wide view of the traffic demands is challenging. Shifts in user behavior, changes in routing policies, and failures of network elements can result in significant (and sudden) fluctuations in load. In this paper, we present a model of traffic demands to support traffic engineering and performance debugging of large Internet Service Provider networks. By defining a traffic demand as a volume of load originating from an ingre ...

The network architecture of the Connection Machine CM-5 (extended abstract)

Charles E. Leiserson, Zahi S. Abuhamdeh, David C. Douglas, Carl R. Feynman, Mahesh N. Ganmukhi, Jeffrey V. Hill, Daniel Hillis, Bradley C. Kuszmaul, Margaret A. St. Pierre, David S. Wells, Monica C. Wong, Shaw-Wen Yang, Robert Zak

June 1992 Proceedings of the fourth annual ACM symposium on Parallel algorithms and architectures

Publisher: ACM Press

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